

IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF OKLAHOMA

W. A. DREW EDMONDSON, in his)
capacity as ATTORNEY GENERAL)
OF THE STATE OF OKLAHOMA and)
OKLAHOMA SECRETARY OF THE)
ENVIRONMENT C. MILES TOLBERT,))
in his capacity as the)
TRUSTEE FOR NATURAL RESOURCES)
FOR THE STATE OF OKLAHOMA,)

Plaintiff,)

vs.) 4:05-CV-00329-TCK-SAJ

TYSON FOODS, INC., et al,)

Defendants.)

THE VIDEOTAPED DEPOSITION OF
ROGER OLSEN, PhD, produced as a witness on behalf
of the Defendants in the above styled and numbered
cause, taken on the 2nd day of February, 2008, in
the City of Tulsa, County of Tulsa, State of
Oklahoma, before me, Lisa A. Steinmeyer, a Certified
Shorthand Reporter, duly certified under and by
virtue of the laws of the State of Oklahoma.

A P P E A R A N C E S

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-and-
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FOR GEORGE'S:	Mr. James Graves Attorney at Law 221 North College Fayetteville, AR 72701
FOR CAL-MAINE:	Mr. Robert Sanders Attorney at Law 2000 AmSouth Plaza P. O. Box 23059 Jackson, MS 39225 (Via phone)
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1 wastewater treatment was a significant component of
2 a sample that we had taken, I see it. It's a
3 distinct signature. The chicken and the wastewater
4 treatment plants are a distinct signature.

5 Sometimes we have both of them, and I can tell what
6 samples with have in both of them, and I can tell
7 relatively which one is more predominant than the
8 other one.

11:52AM

9 Q Why did you not just take effluent samples
10 from POTWs and analyze it for the same list of
11 parameters that you used in your chicken litter
12 signature?

11:52AM

13 A Well, we probably will do that, but right now
14 I have hundreds of samples that have some influence
15 that are downgradient of wastewater treatment plants
16 that create a unique signature in the environment
17 for me. I mean this is what PCA is all about. If a
18 waste is prevalent in the basin and has a unique
19 chemical composition, you'll see the signature of
20 it, and we see wastewater and we see chicken.

11:52AM

11:52AM

21 Chicken is by far the most prevalent signature, but
22 we see when there's wastewater in it that are
23 distinct.

24 Q Dr. Olsen, are you aware of a single piece of
25 peer reviewed literature or a single regulatory

11:53AM

1 conducted investigation that has found the same
2 chemical signature for poultry waste that you claim
3 to have found in the Illinois River watershed?

4 **A** That signature is unique. No one has ever
5 done that extensive list analysis to do this; 11:53AM

6 however, I base the selection of chemicals on what
7 was in the literature. So it will -- those
8 chemicals that I see in that signature match what's
9 in the literature, but there's no one that's ever
10 done a complete chemical signature that I know of 11:53AM
11 that's published in -- someone may have done it. I
12 don't know.

13 **Q** Are you aware of a single other scientist in
14 the world who claims to have identified this list of
15 25 constituents and the coefficients that you've 11:53AM
16 developed and called that a signature for chicken
17 litter influencing water?

18 **A** I'm not aware of any.

19 **Q** You're the first person in the history of the
20 world to have done that; is that true? 11:54AM

21 **A** Yeah, but I'm not the first person in the
22 world to have created chemical signatures for
23 contamination sources in rivers. That's in the
24 literature. It's done routinely, and it's done for
25 an extensive list of parameters, and that's why I 11:54AM

1 have such an extensive list of parameters, because
2 it will create a unique signature.

3 Q Dr. Olsen, how long have scientists and
4 governmental bodies been studying the potential
5 impact of poultry litter on water quality in the 11:54AM
6 United States?

7 MR. PAGE: Object to the form.

8 A I don't know the exact data. I'd have to go
9 back and look at some of the literature sources.

10 Q You'll agree that work has been ongoing for at 11:54AM
11 least decades?

12 MR. PAGE: Object to the form.

13 A I think it just most recently -- I don't know
14 if it's been going on for decades, I can't determine
15 that, but it's certainly got much more scrutiny in 11:54AM
16 the last few years.

17 Q And during all the length of that study by
18 scientists from other firms and government
19 regulators, no one other than yourself has
20 identified this 25 list of parameters in certain 11:55AM
21 concentrations as a chemical signature for poultry
22 litter; is that true?

23 MR. PAGE: Object to the form.

24 A That's my unique work to develop that
25 signature, just like no one's ever developed a qPCR 11:55AM

1 for chicken, but we did it, and we did a signature,
2 too.

3 Q Would the same be true with respect to the
4 signatures that you believe you've identified for
5 POTWs and cattle; no one else in the world has
6 developed the list of parameters that you believe is
7 distinct and unique for those sources of
8 contamination despite all the years of work on water
9 quality in the United States?

11:55AM

10 MR. PAGE: Object to the form.

11:55AM

11 A People have done the same thing for
12 wastewater, and that's where I got some of my
13 analysis, from one of the professors. I'd have to
14 look to see what parameters he looked at and which
15 ones he used in his analysis to determine whether --
16 he didn't do all 25 like I did, though, you know,
17 but he used the same overriding principles to
18 develop --

11:56AM

19 Q Who is he?

20 MR. PAGE: Would you let the witness answer
21 the question, please?

11:56AM

22 Q I'm sorry, Mr. Olsen.

23 A Dr. Furman (sic) at Furman University.

24 MR. ELROD: Dr. Furman at Furman
25 University?

11:56AM

1 good.

2 Q None of the constituents that you use in your
3 signature for poultry waste are only found in
4 poultry waste; correct?

5 A No, that's right. 04:12PM

6 Q Okay. Now, you say that it's the combination
7 that gives you this distinct signature that you see
8 here. Were you referring to something distinct in
9 terms of the signature in Exhibit 22?

10 A That combination right there is unique and 04:13PM
11 distinct.

12 Q Okay. How is it --

13 A Among other things.

14 Q And I'm not trying to be dense at all, Mr.
15 Olsen, but I don't understand how you look at this 04:13PM
16 chart and say it is or it is not a signature of
17 whatever you're studying. So help me understand how
18 you go from this visual image to your opinion that
19 there is something distinct and unique in this
20 dataset under this analysis that reflects a 04:13PM
21 signature of a particular source.

22 A There's other steps here. You just pulled out
23 the first, one of the first steps we do.

24 Q I'm sorry. How would you use this chart in
25 your -- in forming your opinion? 04:13PM